

Claims

- [c1] An electro-optic display comprising:
a layer of reflective electro-optic material capable of changing its optical state on application of an electric field thereto;
at least one electrode arranged to apply an electric field to the layer of electro-optic material;
a heat generating component in heat conducting relationship with the layer of electro-optic material; and
a heat shield disposed between the heat generating component and the layer of electro-optic material, the heat shield comprising a layer of thermally insulating material and a layer of thermally conducting material, the layer of thermally conducting material being disposed between the layer of thermally insulating material and the layer of electro-optic material.
- [c2] An electro-optic display according to claim 1 wherein the heat shield comprises a printed circuit board having a conductive layer therein.
- [c3] An electro-optic display according to claim 1 wherein the heat shield comprises a plurality of layers of thermally insulating material and a plurality of layers of thermally

conducting material, the layers of thermally insulating material alternating with the layers of thermally conducting material, and one layer of thermally conducting material being disposed between the layers of thermally insulating material and the layer of electro-optic material.

[c4] An electro-optic display according to claim 1 wherein the layer of thermally insulating material and the layer of thermally conducting material extend across the whole area of the layer of electro-optic material.

[c5] An electro-optic display according to claim 1 wherein the heat shield comprises a polymeric film having a metal layer formed thereon.

[c6] An electro-optic display according to claim 5 wherein the heat shield comprises an aluminized film.

[c7] An electro-optic display according to claim 1 wherein the electro-optic material comprises a rotating bichromal member material or an electrochromic material.

[c8] An electro-optic display according to claim 1 wherein the electro-optic material comprises an electrophoretic material.

[c9] An electro-optic display according to claim 8 wherein the electrophoretic material comprises at least one capsule

having a capsule wall encapsulating a suspending fluid and a plurality of electrically charged particles suspended in the suspending fluid and capable of moving therethrough on application of an electric field to the electrophoretic material.

[c10] An electro-optic display according to claim 8 wherein the electrophoretic material comprises a substrate having a plurality of closed cells formed therein, each of the cells having therein a suspending fluid and a plurality of electrically charged particles suspended in the suspending fluid and capable of moving therethrough on application of an electric field to the electrophoretic material.

[c11] An electro-optic display comprising:
a layer of reflective electro-optic material capable of changing its optical state on application of an electric field thereto;
at least one electrode arranged to apply an electric field to the layer of electro-optic material;
a heat generating component in heat conducting relationship with the layer of electro-optic material; and
a layer of thermally conducting material disposed between the heat generating component and the layer of electro-optic material.

[c12] An electrophoretic medium comprising a suspending

fluid and a plurality of electrically charged particles suspended in the suspending fluid and capable of moving therethrough upon application of an electrical field to the electrophoretic medium, the suspending fluid containing a compatibilizer to reduce its coefficient of thermal expansion.

- [c13] An electrophoretic medium according to claim 12 wherein the suspending fluid comprises a mixture of an aliphatic hydrocarbon and a chlorinated hydrocarbon.
- [c14] An electrophoretic medium according to claim 13 wherein the compatibilizer comprises a fluorocarbon.
- [c15] An electrophoretic medium according to claim 15 wherein the compatibilizer comprises fluorotoluene.
- [c16] An electrophoretic medium according to claim 15 wherein the fluorotoluene is present in an amount of at least about 5 per cent by weight of the suspending fluid.
- [c17] An electrophoretic medium according to claim 16 wherein the fluorotoluene is present in an amount of at least about 8 per cent by weight of the suspending fluid.
- [c18] An electrophoretic medium according to claim 16 wherein the fluorotoluene is present in an amount not greater than about 10 per cent by weight of the sus-

pending fluid.

[c19] An electrophoretic medium according to claim 12 comprising at least one capsule having a capsule wall encapsulating the suspending fluid and the electrically charged particles.

[c20] An electrophoretic medium according to claim 12 comprising a substrate having a plurality of closed cells formed therein, each of the cells having therein the suspending fluid and the electrically charged particles.